

REMARKS/ARGUMENTS

Applicant responds herein to the Office Action dated June 3, 2005. A Petition for Extension of Time (one month) and the fee therefor are enclosed.

Claims 1-5, 7 and 8 stand rejected on grounds of anticipation by Kajino, et al. (6,793,769). Alternatively, claims 1-5, 7 and 8 stand rejected on grounds of anticipation by Adachi Hideki (JP 11-087294). Further, claims 6/1, 6/2 and 6/3 are stated to be obvious over Adachi Hideki, in view of Tsuchiya, et al. (6,810,888). There is also a provisional rejection of claims 1-8 under the judicially created doctrine of obviousness-type double patenting on grounds of conflict claims 1-36 of co-pending Application No. 10/659,213. Reconsideration is requested in view of the following remarks.

Preliminarily, the applicant opts not to formally respond to the provisional rejection on the basis of obviousness-type double patenting, because this is only a provisional rejection.

Substantively, it is noted at the outset that claim 1 is directed to a substrate processing apparatus, including such basic components as a holding element for a substrate which is provided on a rotating base and a rotation element which rotates the substrate held by the holding element. In addition, the claimed apparatus has an atmospheric cutoff plate positioned above the holding element and a splash preventing element, the latter being at the center of the discussion relative to patentability.

In accordance with claim 1, the splash prevention element includes "a plurality of guiding members for forming said plurality of recovery ducts so that a vertical spacing of each opening thereof is not less than a distance between said rotating base and said atmosphere cutoff plate." Claim 1 further recites: "wherein a level of a top surface of a guiding member used for forming said selected recovery duct is set not higher than a level of a top surface of said atmosphere cutoff plate near an opening of said selected recovery duct." (emphasis added).

In accordance with one embodiment of claim 1 described in the instant specification, and with reference to the drawings, it is seen that the top surface 51a of the splash guards (the guiding member which forms a selected recovery duct) has a level lower than the level of the top surface 30a of the atmosphere cutoff plate 30 (Fig. 4). This causes an outer atmosphere air flow in a direction indicated by the arrow S1 to form without any turbulence in the recovery duct 54.

Thus, a processing solution is constrained to flow only through the recovery duct 54 for recovery of solution without splashing from the recovery duct 54 to the outside.

In the cited Adachi document, the top surface of the inclined guiding member 31a has a level higher than the level of the top surface of the atmosphere cutoff member 60 in the vicinity of an opening of the drain bath 24a, as shown in Fig. 5 thereof. Likewise, with reference to Fig. 6 of Adachi, the top surface of the guiding member 30 is set at a level higher than the level of the top surface of the atmosphere cutoff member 60 in the vicinity of the opening drain bath 24b. The drain bath 24b communicates with the space provided in the guiding member 30, and hence the opening of the drain bath 24 is substantially near the gas inlet 32b.

With such an arrangement of the guiding members and the atmosphere cutoff member, an outer atmosphere vertical air flow is generated, which flows into the drain baths 24a and 24b, as shown in Figs. 5 and 6 of Adachi.

Thus, in the example shown in Fig. 5 of the reference, the processing solution is splashed not only into the drain bath 24a, but also into the drain bath 23. In the example shown in Fig. 6, the processing solution is splashed not only into the drain bath 24b, but also into the drain baths 24a and 23. This causes a single processing solution to flow through different recovery ducts, while causing several processing solutions to flow through a single recovery duct. As a result, separate recovery of different solutions cannot be realized with a high degree of either efficiency or reliability.

Similar remarks are applicable to claim 2. Thus, in the example shown in Fig. 5 of Adachi, for recovering the processing solution, the lower surface of the partition member (guiding member) 22a has a level lower in the vicinity of the opening of the drain bath 24a than the level of the lower surface of the spin base 3. Likewise, in the example shown in Fig 6, the lower surface of the inclined guiding member 31a has a level lower in the vicinity of the opening of the drain bath 24b than the level of the lower surface of the spin base 3.

This arrangement of the prior art, wherein the guiding members and the atmosphere cutoff member are located as described, will cause the outer atmosphere under the spin base to flow into the drain baths 24a and 24b, generating turbulence in the drain baths 24a and 24b.

However, according to claim 2, “a level of a lower surface of the guiding member used for forming a selected recovery duct is set not lower than a level of the lower surface of the

rotating base near an opening of the selected recovery duct". More specifically, the lower surface 52b of the splash guard 52 (the guiding member which forms the recovery duct) has a level higher than the level of the lower surface 10b of the spin base 10 (Fig. 4). This causes air flow of the outer atmosphere in a direction indicated by the arrow S2 to form no turbulence in the recovery duct 54. Thus, a processing solution is caused to flow only through the recovery duct 54 for recovering solution without being splashed from the recovery duct 54 to the outside.

The foregoing remarks are generally applicable to the other reference (Kajino) which is cited as an anticipatory reference.

In addition, it is noted that the remaining claims 3-5, 7 and 8 are dependent on one or the other of claims 1 and 2 and the foregoing remarks are applicable thereto. Therefore, all of the claims of record are distinguishable over the prior art. These remarks also apply to claim 6.

As concerns the (provisional) obviousness-type double patenting rejection, it is worth noting that the instant claims differ from the claims that are pending in serial number 10/659,213, because those other claims do not necessarily require an atmosphere cutoff plate, which is a central element of the instant claims. Those other claims are concerned with features of the recovery duct.

The applicant also encloses an English translation of the priority document, in order to accord the present application the date of the priority document against any potential prior art.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims and pass this case to issue.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 3, 2005

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October 3, 2005

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Respectfully submitted,


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